

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 038PCT 1640	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/14381	International filing date (day/month/year) 17.12.2003	Priority date (day/month/year) 08.01.2003
International Patent Classification (IPC) or both national classification and IPC B22F7/00		
Applicant INCO LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 31.07.2004	Date of completion of this report 06.04.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Noske, W Telephone No. +49 89 2399-8448 

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International application No. **PCT/EP 03/14381**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-8 as originally filed

Claims, Numbers

1-14 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-14
Inventive step (IS)	Yes: Claims	
	No: Claims	1-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations

see separate sheet

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International application No. PCT/EP 03/14381

1. Each of

D1 WO-A-01 70436, Example 2,

D2 US-A-5 634 189, Fig. 1 and description relating thereto,

D3 US-A-6 241 469, Fig. 1 and description relating thereto,

D4 US-A-2002 172 836, claims 1-13,

relates to a PM-made or -processed component having a porous region formed from a metal alloy comprising an intermetallic phase or solid solution as well as a non-porous (areal fluid-tight) region formed from a metal, a metal alloy, an intermetallic phase or a solid solution.

D1 discloses a composite formed from a massive (non-porous) bar of TiNi and a mixture of elemental powders of Ti and Ni by compaction and an adjoining reaction sintering process. The produced bar has a massive core which is covered by a porous coating of TiNi.

D2 discloses a PM-made piston having a solid, dense, fluid-tight outer shell 2 of compactly sintered powder and a porous core 3, the porosity thereof increasing in the direction to the centre. According to D2, paragraph bridging columns 4, 5, the powder particles of the core 3 and the shell 2 consist in part of the metallic components of an intermetallic compound in amounts according to stoichiometric relationship such that the entire component consists of an intermetallic compound after the sintering process which is performed at the necessary reaction temperature.

D3 discloses a turbine blade, the leading edge part 4 of its metal body being covered by a protective coating 10 of a pressed and sintered intermetallic felt of Fe- or Ni-aluminide.

D4 discloses a composite sintered bearing contact component comprising a porous sintered iron base alloy comprising at least one of Al, Si, Co, Ni, Cu in the form of an intermetallic compound and having a porosity of 5-35 vol.-%, the said porous layer being sinter bonded to a solid (cylindrical or sheet-like) metal backing, e.g. in the form of a steel pipe.

2. Each of D1-D4 takes away novelty from the subject-matter of independent claims 1 and 14. The same objection applies to dependent claims 4, 7 and 9.

The subject-matter of independent claims 10 and 13 is not novel in view of D2.

The same objection applies to dependent claims 2, 6, 8, 11 and 12.

Dependent claim 3 lacks novelty in view of D1.

Dependent claim 5 lacks novelty in view of D3.

3. It is remarked that a powder cannot be characterized by its "sintering activity obtained

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by high-energy milling", cf. claim 11.

A reason for that can be found in the Examination Guidelines CIII 4.7b requiring that only process steps which can be detected on the powder in the form of features doubtlessly following from the claimed process, which features have to be shown by the Applicant himself, can distinguish the powder mentioned in the claim from known powders.